2D molecular self-assembled nanoporous networks on silicon surface

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Abstract

Nowadays more than 90% of published results show molecules adsorbed onto metallic or HOPG surfaces. Nevertheless, there is a real interest to develop molecular self-assembled nanoporous layers onto semiconductors and in particular onto silicon surfaces. To circumvent the problem of the high reactive silicon surfaces, we have used an original unreactive high boron doped silicon $\sqrt{3}$x$\sqrt{3}$-SiB(111) reconstruction. Very amazing results have been obtained in ultra-high vacuum showing large and perfect molecular self-assemblies (1).

References:

1) Y. Makoudi, J. Jeannoutot, F. Palmino, F. Chérioux, G. Copie, C. Krzeminski, F. Cleri, B. Grandidier, Surface Science Reports 72 (2017) 316–349

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